TWO NEW SPECIES OF PROCTOTRUPOIDEA FROM IOWA (Hymenoptera)¹

By A. A. OGLOBLIN,

University of Buenos Aires, Argentina

The present paper contains the descriptions of two new species of proctotrupoids collected at Ames, Iowa. The types are in my collection.

Family Calliceratidae

Calliceras amesicola, new species.

Female. Length, 1.20–1.60 mm. General color light ochraceous yellow, tip of scapus, pedicellus and five basal funicular joints of antennae brown, the rest of antennae and head black. Anterior trochanters, posterior coxae (except extreme base) white. Meso- and metapleura, two oval laterodorsal spots of first abdominal tergite and dorsal spots of 2d, 3d and 7th tergites and sheath of ovipositor brownish-yellow. Mandibles, posterior teeth of propodeon and ovipositor reddish-yellow.

Head transverse, 0.312 by 0.407 mm. Eyes large lateral, 0.348 mm., hairy; ocelli in almost equilateral triangle. Occipital margin with some short vertical ribs. Frons and vertex with a longitudinal furrow reaching the anterior hollow. Whole surface of head finely granulose, with short dark pilosity. Antenna (fig. 1); scapus with short radicula 23 by 30 microns. Measurements of antennal joints in microns: 238(53); 78(34); 57(34); 38(40); 38(43); 38(46); 46(50); 61(57); 65(58); 114(57). Antennal joints 7 – 9 with toothed distal border; all funicular joints with trichoid sensoria which increase in number from 2 to 15; tenth joint as long as two and one-half preceding joints combined.

Thorax, 0.429 by 0.362 mm. Pronotum only 0.04 mm. in the middle, distinctly raised before occipital articulation. Mesonotum finely cellulated. each cell with a short hair. Scutellum 0.232 mm. long, with the large axillae overlapping posteriorly to the narrow metanotum. Propodeon with two strong posterolateral teeth, the spiracles situated cephalad from them; part between teeth raised in a lamellar process so as to divide the propodeon into horizontal and vertical parts (figs. 3 and 4). Anterior and middle coxae finely cellulate; posterior coxae obliquely striated (fig. 4).

Wings short, reaching anterior third of first abdominal tergite (holotype) or slightly surpassing the posterior margin of propodeon (paratypes); stigmal vein evidently on the anterior margin of wing. Abdomen 0.94 by 0.48 mm., anterior border margined, with 10 short longitudinal ribs; anterolateral teeth very small; fourth tergite, like all representatives of subfamily Calliceratinae, with a peculiar organ (fig. 2) discovered by Waterston (Bull. Ent. Res. 14:116, 1923) who assumed it to be the respiratory in function. Ovipositor 0.528 mm., its base extending into second abdominal segment.

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Holotype (female and paratype, Ames, Iowa, October 1943; collected by C. C. Blickenstaff, who kindly presented the specimens to me.

This species is easily distinguished from C. fuscipes (Ashm.), pallidipes Fouts and fasciata Fouts, by the structure of the

antennal segments.

A study of light and dark specimens of several species of the genus Calliceras shows that the peculiar structure described by Waterson (loc. cit.) has no connection with the tracheal system and that it is not respiratorial in function. The presence of a few very large cells close to the basal cavity of this structure (fig. 2) indicates the possibility of glandular function. I propose the name Waterston's organ for this interesting structure.

Family Scelionidae

Genus TRICLAVUS Brethes

Ann. Mus. Nac. Buenos Aires, 27:411, 1916.

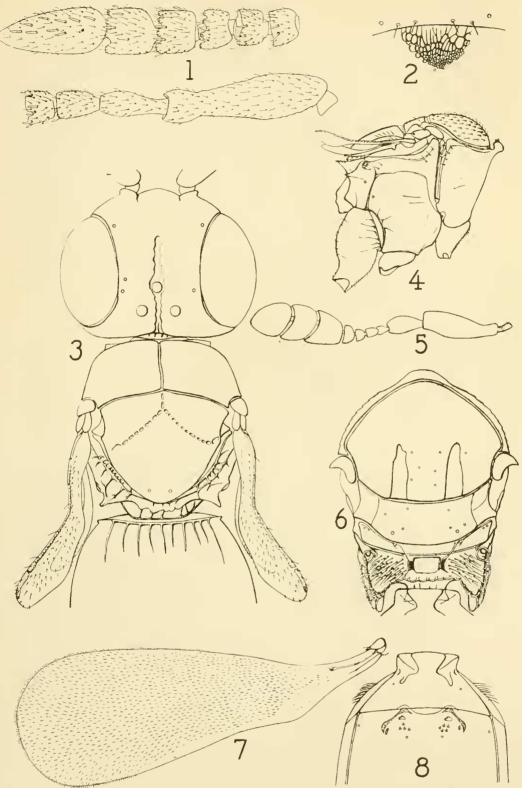
This genus was not included by J. J. Kieffer in his revision of the family, Das Tierreich Lief. 42, 1926, and apparently has never been reported from the United States. This warrants the description of a new species found by the author in Iowa. Several other undescribed species are known to the author from Argentina. The following lines are intended to complete the laconic diagnosis of the genus.

Female antenna with a three-jointed club; seventh and eighth joints not protruding as much ventrodistally as in *Allotropa*; flagellar joints of male antennae without whorls of long hairs. Mesoscuto-scutellar suture without foveae. Scutellum with well developed axillae, not overlapping metanotum posteriorly. Propodeon with two short, widely separated, longitudinal keels, distally and laterally bordered with a transparent, lamellar structure. Fore wing with a very short nervure only about one seventh of wing's length. Anterior abdominal tergites without parallel longitudinal striae, bearing some deep and irregularly shaped grooves.

Dr. G. von Szelenyi (Ann. Mus. Nat. Hung., 31: 126–128, figs. 12–16, 1938) recently described a new genus *Platyllotropa*, and evidently was unaware of Brethes' paper. Judging from the original description, *Platyllotropa* should be considered synonymous with *Triclavus*; the very elongate head of the latter is the only distinctive character and hardly sufficient to separate them as different genera.

Triclavus drakei, new species

Female. Length of body 0.99 mm. Black, antennae and legs light honeyyellow, the last three antennal joints light brown. Wings very slightly and evenly infumate. Head in vertical aspect transverse, 0.156 by 0.251 mm.



Calliceras amesicola: Fig. 1, antenna of female; 2, Waterston's organ; 3, head and thorax, dorsal view; 4, thorax, lateral view. Triclavus drakei: Fig. 5, antenna of female; 6, thorax, dorsal view; 7, anterior wing; 8, base of abdomen.

Eyes lateral, hairless. Antenna (fig. 5) 0.38 mm. in length; scape distinctly scaly-reticulate, with sparse white pilosity. Radicula 19 by 9 microns. Measurements of antennal joints in microns: 129(38); 57(24); 20(17); 20 (16,5); 19(19); 19(22); 53(43); 47(44); 56(38). Surface of head finely cellulate.

Thorax (fig. 6) 0.339 by 0.251 mm. Pronotum 0.113 by 0.245 mm., only 0.006 mm. at the middle, distinctly scaly; mesoscutum 0.164 by 0.232 mm., with broad, short, parapsidal furrows on the posterior half; surface finely cellulate, the pilosity very short and sparse. Scutellum 0.099 mm. long, the axillar parts separated by fine rugae. Metanotum only 0.019 mm. at the middle. Propodeon 0.131 by 0.228 mm., slightly carved cephalad, with faintly convergent lateral borders; posterior margin profoundly carved on both sides of petiolar process. Spiracles rounded, situated slightly cephalad from the posterior margin of metanotum, with a large transparent circle which is joined caudally to the lateral lamellar structure. Two stout widely separated keels united caudally with posterior lamellar process, the medial part between keels smooth, hairless; lateral parts with rather long white hair.

Fore wing (fig. 7) 0.77 by 0.267 mm.; vein 0.109 mm. long; covered with hair, 7 microns long, the longest bristle of marginal fringe 9 microns.

Hind wing 0.628 by 0.123 mm.; hamuli at 0.232 mm. from the base of wing; covering hair 4 microns., the longest bristle of marginal fringe 47 microns.

Abdomen 0.518 by 0.286 mm., all tergites with pleural parts completely separated by sutures; first tergite 0.085 mm. long, with two profound depressions having sparse white pilosity laterally; two round sensorial pustulae externally from depressions.

Second tergite 0.342 mm. long, with two oblique grooves, caudally with two groups of very small spines. Tergites 3–5 with a single row of sparse hairs near to posterior margin. Base of ovipositor at the cephalic border of second abdominal segment (fig. 8).

Holotype, female, taken by the author at Ames, Iowa, Oct. 3, 1943. It is my pleasure to dedicate this interesting species to Dr. Carl J. Drake, Ames, Iowa, with whom I have been closely associated while in the United States.